

As an Extra Class Amateur Radio Licensee and having what used to be a First Class Radiotelephone License along with a BSEE and MSCS, I offer the following comments.

In general, it seems like you want to repeal the laws of physics. Power lines are wires, very long wires and they will radiate. There have been ample demonstrations of this by ARRL and others during BPL testing. All the notching and band blocking and filtering will do little to prevent interference somewhere sometime. The first time a ham moves into a BPL neighborhood and starts using his equipment, people will start complaining that their internet connection doesn't work. They will see the antennas and start complaining to the ham and when he says talk to your ISP, they'll just stay mad at him. It happens now with TVI and the only thing that seems to work is the ham helping the neighbor fix the problem. Remember that the interference problem goes both ways. Part 15 devices have to accept interference and must not cause any. The idea of a large database of devices that can be adjusted to not generate interference and avoid outside interference has a very low probability of success. Hams have bands of frequencies at 3.5, 5, 7, 10, 14, 18, 21, 24 and 28 MHz and all but the basic license can operate on all of them. The cost of having dynamically configurable equipment that can be notched at all these frequencies has to be significant. In order to adequately service a neighborhood with sufficient bandwidth to compete with cable or DSL, you can't afford to give up that much bandwidth. In neighborhoods without hams, people will get used to a level of service that cannot be sustained when the first ham moves in. Even in neighborhoods with antenna restrictions, hams can and do legally operate and use of an indoor antenna will only exacerbate the interference BPL must accept. It appears that either the BPL providers feel the laws of physics don't apply or they don't have to worry about interference to and from hams because "they're just hams."

The Potomac Valley Radio Club and ARRL are filing detailed technical discussions about the problems and what might work for solutions and I agree with their general arguments but the real problem is that BPL will never be economically feasible. It can't compete with DSL or cable in standard neighborhoods because of bandwidth problems and it can't compete in rural areas because there aren't enough customers to support the cost of equipment. The whole idea sounds to me much like some of the DOT COM madness of the 90s. If a stockbroker came to me and asked me to invest in this, I'd laugh him out of the room.

To summarize, it won't work technically without trampling on licensed users at some point and it is not economically feasible for it to compete with cable, DSL or wireless systems. Therefore, I feel the entire concept should be withdrawn from consideration. If power companies want to get in the internet business, get them to fix their existing infrastructure and when they do that, string either cable or fiber at the same time and use non-radiating technology to get in to the business.